MILATARI
(Milwaukee Area ATARI User Group)
NEWSLETTER

olume 1 Number 1 December 1981

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NEXT MEETING

SATURDAY, December 19th

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FEATURES THIS ISSUE

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Milwaukee Area ATARI Users Group
c/o David Frazer, Editor
Waukesha State Bank
P.O. Box 648
Waukesha, Wisconsin 53187-0648

MILATARI NEWSLETTER

MILWAUKEE AREA ATARI USERS GROUP

OFFICERS

PRESIDENT:
Gary Nolan
11230 W. Bobolink
Milwaukee Wi 53225
(414)353-9716

VICE-PRESIDENT:

SECRETARY:

TREASURER:

EDUCATION:

NEWSLETTER:
David Frazer
2305 Barberry Court
Waukesha, Wi 53186
(414)542-7242

CORRESPONDENCE SHOULD BE FORWARDED TO:
Milwaukee Area ATARI Users Group
c/o David Frazer, Newletter Editor
Waukesha State Bank
P.O. Box 648
Waukesha, Wi 53187-0648

MEMBERSHIP INFORMATION

Membership is open to individual who have an interest in using and programming ATARI computers. Membership includes the subscription to this newsletter and free access to the users program library and is $--.-- per year. Single newsletters are $1.00. A guest may attend one meeting at no charge. The users meetings are held once monthly at 4:00PM on the third Saturday of each month at:

MICROCOMPUTERS & MAGIC
256 1/2 BROADWAY STREET
WAUKESHA, WISCONSIN 53186
(414)549-0700

MEMBERSHIP APPLICATION FORM:
(Please fill in the information requested and forward to the treasurer with your dues)

Name:_____ Computer (model/memory) _____

Address:_____ Disk (# of drives/model) _____

City:_____ State:____ Zip____ Modem (Y or N/BAUD rate) _____

Phone:(____)_____ Printer (brand/model) _____

I can make presentations at the user group meetings (Yes or No) _____

I have software to add to the user group library (Yes or No) _____

WELCOME

Welcome to the first issue of the MILATARI NEWSLETTER and thank you for being with us on this premiere issue. We hope to make this newsletter a meaningful tool for the Milwaukee area ATARI users. The idea is simple; keep you up to date with the latest news in the world of ATARI and the Milwaukee area users. To do this, we'll be covering a variety of subjects -- from new equipment, ideas, and uses that affect us now ... to new findings and concepts.

Our style will be informal. Our sources of articles for each newsletter will come from many sources. Most important on the list of sources will be YOUR contributions: programs - slick subroutines - software reviews - hardware reviews - goings-on in the micro computer world - good gossip - whatever. We will also feature articles gathered from other ATARI user group newsletter. An example of this is the fine article on disk drive care found in this issue.

In each issue we will try to give you as much information as we can gather and cram into 8 columns. We hope you enjoy reading the MILATARI NEWSLWETTER as much as we enjoy preparing it and we welcome your comments or suggestions for future issues.

David Frazer, Editor

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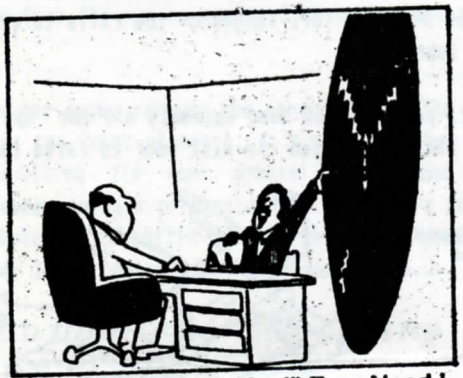
The ATARI 816 ??



'It's the Only Disk You'll Ever Need.'

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BIG MEMORY

A 128K memory module is available for Atari 800 personal computers from Axlon, Inc., Sunnyvale, Cal. Memory management and utility software make it perform as bank select RAM or as a disk drive. Price $699.

MEETING PLANS

President Gary has an interesting adgenda planned for our December 19th users group meeting.

The main attraction will be a trip into the world of online information services. Live demostrations of the services of "SOURCE" and "COMPUSERVE" will be presented. The TELELINK(tm)I cartridge and CHAMELEON CRT Emulator will be used online during the presentation.

A second topic of interest will be a discussion on the makeup of our user's group library. What will it be ... tutorials ... books ... game programs ... programs keyed from COMPUTE!, ANALOG, CREATIVE COMPUTING, etc. ... all of the above? ... non of the above? ... something else? Bring your ideas to the meeting.

There is still room on the adgenda for your presentation. Call President Gary at 353-9716 to get on.

BYTES and NIBBLES

BUGS-BUGS-BUGS

Here is a list of known bugs in Atari's BASIC (as found in the November 1981 issure of COMPUTE!)

1. In the course of editing a BASIC program, sometimes the system loses all or part of the program and/or it simply hangs. Often, turning the power off and back on is the only solution. Contrary to popular belief, this condition is related to nothing execpt the size of the program that is being moved by a delete operation (not the size of the deleted line). FIX: NONE. Sorry about that. Just be sure and SAVE your programs often, especially if you are doing heavy editing.

2. String assignment that involve the movement of multiples of 256 bytes does not move the first 256 bytes. FIX: don't move multiples of 256 bytes. An easy way to accomplish this is a always move an ODD number of bytes. Usually, moving one extra byte is fairly easy to handle.

3. The cassette handler doesn't always properly initialize its hardware interface. Symptoms: ERROR 138 and ERROR 143. FIX: use an LPRINT before doing a CSAVE, etc. (This isn't a BASIC bug, but BASIC can be used to fix it.)

4. Taking the unary minus of a zero number (e.g., PRINT -0) can result in garbage. Usually this garbage will not effect subsequent calculations, but it does print strangely.

(con't on page 6)

HAVE YOU HUGGED YOUR DISK DRIVE TODAY?

OR...

The Care and Feeding of the 810

by Joe Bolt

(Editors note: This is a reprint of an article which appeared in the West Valley ATARI Users Group Newsletter. This group meets in Northridge, CA.)

Is your 810 disk drive beginning to get a little temperamental?? - having difficulty or outright refusing to read some disks?? - getting noisy, giving you ERROR-138 or 144 more frequently?? .... then be nice to it and give it a minor tuneup!! It's easy, it's fun, and it will reduce or eliminate many of the above problems.

Getting Started

First, disconnect the drive and place it on a clean work bench or table, away from any magnets. (Motors, can-openers, radio speakers). Next, in a friendly, reassuring voice, tell it "This is not going to hurt a bit and you will feel much better when it's all over". Placing it on newspaper or cloth may make it feel more secure. If it doesn't run away, proceed as follows...

1. Using an Exacto knife, carefully remove the four small plastic disks from the shallow recesses on top of the drive. Stick the disks to the top, next to the holes they were hiding.
2. With a non-magnetized phillips screwdriver, loosen the four screws in the holes and carefully remove the top.

Next, in the same friendly manner, speaking directly to its innerds, tell it how sorry you are for all the times you shouted at it, hit it on its top and sides, and bounced it on the table. Tell it you will try not to ever do it again (If it behaves itself).

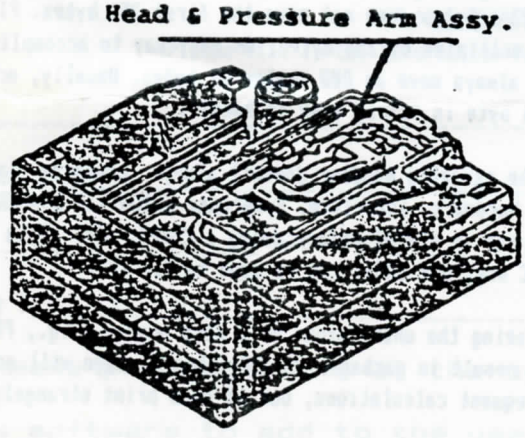

Fig. 1

Servicing the Head Assembly

With the door closed (down), locate the head and pressure arm assembly (see Fig. 1) and carefully move the assembly forward and backward to familiarize yourself with the head assembly movement on the guide rails. (You are not hurting anything by doing this). Note how the stainless steel guide rails go through holes in the plastic head and pressure arm assembly.

Saturate a Q-Tip with denatured alcohol and clean the guide rails, moving the head assembly forward and backward, out of the way. Denatured alcohol only should be used since other forms of alcohol leave a residue. (Sorry, vodka or tequila won't do it!!). With a Q-Tip or bent paper clip, apply a very thin coating of silicon lubricant to the guide rails, moving the head assembly out of the way so that the entire rail can be lubricated. Try to get some on the bottom rails as well.

Silicon lubricant must be used because it won't drip or run when the drive heats up during use. Silicon lubricant may be obtained in several different forms: as a gel, in tubes (at hardware or auto parts stores ... but MUST BE SILICON LUBRICANT), or in liquid form, usually in spray cans. (Radio Shack, etc.). If you intend to use the SPRAY lubricant, DO NOT SPRAY INSIDE YOUR DISK DRIVE!! You will make it very unhappy ... and a happy drive is a working drive!!! If you are using a spray can, shake the can thoroughly, go outside away from the drive, saturate several Q-Tips or spray some in a pill bottle, then go back and apply lubricant carefully to the guide rails. After applying the lubricant, gently move the head assembly forward and backward a number of times over the full length of the rails to evenly distribute the lubricant.

Next, position the head assembly all the way back against the back stop. Open the disk door to raise the pressure arm.

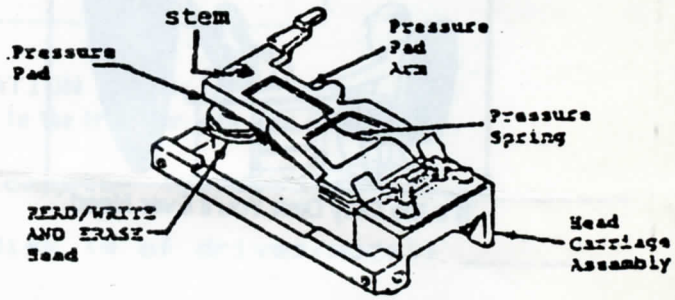

Fig. 2

Saturate a Q-Tip with the alcohol and thoroughly clean the Read/Write Head, being very careful not to raise the pressure pad arm past its stop. (This could deform the spring, resulting in insufficient pad pressure). Insufficient pad pressure is one of the causes of read/write and formatting problems. This is usually caused by allowing

DISK CARE (con't)

the disk door to snap open instead of releasing the catch and raising the door gently.

Now let's take a look at the tiny pressure pad assembly. You won't see much because the pressure pad is actually a small felt or composition pad which is cemented to a small plastic holder with a stem. All you see is the top of the stem where it protrudes through the pressure pad arm. The top of the stem is slotted with what looks like a screwdriver slot, but it does permit you to turn the pressure pad below.

For some reason, only known to Atari and M.P.I., the pressure pad orientation seems to be somewhat critical, particulary to the formatting operation. We have had drives which absolutely would not format under any circumstances. By merely turning the pad the problem was solved!!!

To clean the pressure pad, use a Q-Tip dampened with alcohol and by reaching under the pressure pad arm, just above the Read/Write head. Lightly brush the pressure pad several times to remove any disk residue or contamination from the face of the pad. screwdriver or sharpened orange stick inserted into the stem slot, turn the stem back and forth several times to assure that it is free in the hole. Be careful not to use too much pressure. If it appears to be stuck, leave it alone!! Wait a few moments to evaporate any alcohol the pad may have absorbed, then close the disk door. This lowers the pad to press against the Read/Write head. Place a finger just behind the slotted stem and lightly press down to straighten the pad assembly if it is crooked, and to assure that the pad is parallel with the face of the head.

This completes the major part of the minor tuneup. The final step is not for the faint-of-heart. It's really quite easy, can't hurt anything (if your gentle) but it does get a little scary under certain circumstances. So, have a cup of coffee or whatever, to settle your nerves, get a good grip on yourself and let's continue with the final step....

SPEED CONTROL SERVICING and ADJUSTMENT

Refering to fig. 3, locate the speed control gadget (affectionately known as a potentiometer or pot). The round plastic disk on top of the gadget is actually the knob which turns to set and control the motor speed. DO NOT MOVE THIS KNOB AT THIS TIME. Now comes the fun part.... take your drive back to "Mother" 800, connect it up and turn it on. Load a copy of DOS-2.0S into the computer.

Take a new, unformatted diskette, insert it into the drive and start the formatting sequence while watching the head assembly movement. Surprise!! If you lubricated the rails properly, you should barely be able to hear the drive formatting. With the top back on, after a few hours of operation, you won't be able to hear the head movement at all, unless you put your ear against the drive while it's formatting. This has fooled a number of fathers who thought the drives had stopped formatting. Next, write DOS on the newly formatted disk and then write MEMORY SAVE on the disk. Now turn off the computer and remove the basic cartridge.

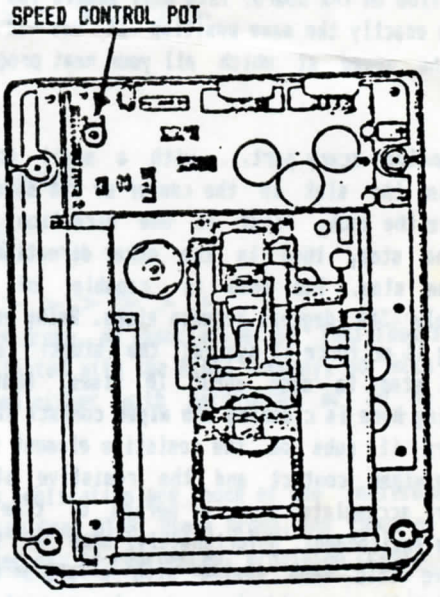

Fig. 3

Now comes the tricky part... with a stop watch, the Chrono function on your digital watch, or the second hand on a clock, time exactly how long it takes from the time you turn your computer on until DOS begins to appear on the screen. This time should be 42.5 seconds, if your motor speed was set correctly at 290 RPM (spindle speed) as recommended by the factory. (Unfortunately, I have yet to find one that was even near the correct speed, but I used some sophisticated equipment to check the speed).

NOTE: If you have the Fast Format Modification installed in your drive, the correct loading time should be 34 seconds.

If, after doing this loading time test several times, you find that the loading time is between 42 and 43 seconds (34 seconds for the fast format), it is best to leave it alone and go on to the end of this epic covering re-assembly. 42.5 seconds loading time equates to approximately 290 RPM spindle speed. Each second, more or less, represents approximately 5 RPM difference from optimum speed. If the loading time took longer than 42.5 seconds, your motor speed is slower than optimum, and vise-versa. If your loading time is not within the acceptable limits, 42 to 43 seconds, you may want to reset your motor speed as described below... if you've got the guts!!

DISK CARE (con't)

Re-adjusting Motor Speed

Remove diskette, turn off and disconnect drive. With a nylon tip pen, put a dot on the edge of the speed control disk/knob and draw a short line directly below this dot on the circuit board. Make sure that the dot lines up directly with the line on the board. This will enable you to return the knob to exactly the same position it was in when we started (the speed at which all your neat programs were recorded).

Now comes another scary part... with a small screwdriver inserted in the slot in the center of the speed control knob, rotate the knob, first in one direction until it reaches the stop, then in the other direction until it reaches the stop. The knob is capable of rotating approximately 300 degrees between stops. Being very gentle (don't bang it or force it against the stops) rotate the knob from stop to stop about 10 times. What you are accomplishing here is cleaning the wiper contact (below the knob) where it rubs on the resistive element inside the gadget. The wiper contact and the resistive strip will oxidize or accumulate over a period of time or in an unfavorable environment. Unfortunately, some of the older drives have this knob sealed with a form of brown gunk (called Gliptol) on on side in order to prevent it from rotating under vibration. Have faith, this seal will break with turning pressure, unless they really loaded it on. Don't apply excessive down pressure or too much turning pressure. If yours is a particularly difficult one, find someone with small fingers to reach in, grasp the knob between the thumb and forefinger, and turn. This will usually break the Gliptol seal. Fortunately, only a few of the earlier drives had the control sealed. If with a reasonable amount of effort or turning pressure (don't push down) you still can't break the seal ... FORGET IT!!

Having cleaned the wiper contact as described above, return the knob to its original setting by carefully aligning the dot with the line on the board. Reconnect the drive to the computer and turn it on. Using our test disk, re-run the loading time test as before. If the loading time is not within the 42-43 second optimum time frame, readjust the motor speed control knob in very small increments and re-run the test. If your motor speed is too slow (i.e., taking longer than 43 seconds) rotate the speed control knob counter-clockwise. If the motor speed is too fast, rotate the knob in the clockwise direction, but only in very small increments. Each adjustment should be no more than the thickness of a nickel. When you have readjusted your drive motor to the correct speed, this completes the minor tuneup. If you still have problems after the tuneup, your drive may require more professional help offered at a Disk Drive Hospital where we have all the equipment to perform major surgery such as critical head alignment, pressure arm adjustment, diagnostic tests and intensive care.

To finish the job, carefully re-install the top section, but don't tighten the screws too tight. Don't forget to put the little plastic disks back over the holes. They serve no useful function at all, but your drive likes them because they make it look nice. Finally, tell your drive, "see, that didn't hurt at all", and while fondling and caressing it around the connector area (it loves that), tell it you are sorry you've neglected it, that you love it and that you are sure it will do its very best for you.

After you have performed this tuneup once or twice, the entire procedure takes less then 10 minutes, and with the exception of lubricating the guide rails, which should only be done when your drive gets noisy during formatting, the remainder of the tuneup should be performed every couple of months to keep your drive happy, healthy, content, and performing well.

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PROGRAM-OF-THE-MONTH CLUB

We are looking for interesting programs in BASIC & ASSEMBLER to feature in each issue. Your nifty game, educational program, etc. should be shared with your fellow ATARI user !!

Please send your program listings with or without commentary to the editor. If possible, send programs on cassette or diskette (your media will be return promptly). LIST or SAVE format is OK.

Watch for the next issue when the feature program will be BOMBS AWAY by Ross SchwartzBerg. Ross is a member of the Westvalley ATARI users group in Northridge, CA.

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(con't from page 3)

FIX: don't use the unary minus in cases where there may be a doubt (e.g., using PRINT 0-x if 'x' might be 0).

5. Strange things can happen if you type in a program line longer than three screen lines long. Reason: the system editor device(E:) cuts off your input at three lines and gives it to BASIC, which processes it as is, and then E: gives the rest of your input to BASIC as the next line! FIX: don't try to put in program line bigger than three screen lines.

(more BUGS next issue)